



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: The Application of Vernard W. Sanders

Application No. : 10/763,091

Applicant : Sanders

Filed : January 21, 2004

TC/A.U. :

Title : Self Positioning Astragal Seal

Examiner :

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Hon. Sir:

Attached hereto is Form PTO-1449 listing documents believed relevant to the subject application. It is respectfully requested that these documents be considered by the examiner and an initialed copy of each form be returned to the undersigned.

This disclosure statement should not be construed as a representation that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists.

It is believed that this disclosure complies with the requirements of 37 C.F.R. §§ 1.56, 1.97, and 1.98, and the Manual of Patent Examining Procedures § 609. If for some reason the examiner considers otherwise, it is respectfully requested that the undersigned be called so that any deficiencies can be remedied.

A copy of each document is enclosed.

Some of the documents may have markings thereon. No significance is meant to be attached to the markings.

These documents are not necessarily analogous art.

Document AA (U.S. Patent No. 5,857,291 (Headrick)), Document AB (U.S. Patent No. 5,350,207 (Sanders)), Document AC (U.S. Patent No. 5,328,217 (Sanders)), Document AD (U.S. Patent No. 6,491,326 (Massey, et al)), Document AE (U.S. Patent No. 6,125,584 (Sanders)), Document AF (U.S. Patent No. 6,457,751 (Hartman)), Document AF (U.S. Patent No. 5,335,450 (Procton)), Document AG (U.S. Patent No. 5,590,919 (Germano)), Document AH (U.S. Patent No. 4,429,493 (St. Aubin)), Document AI (U.S. Patent No. 4,058,332 (DiFazio)), Document AJ (U.S. Patent No. 6,453,616 (Wright)), Document AK (U.S. Patent No. D293,719 (Stepanian)) are discussed in the Background Art portion of the specification.

Different astragals have been disclosed.

Document AA (U.S. Patent No. 5,857,291 (Headrick)) discloses an astragal with integral sealing lock block, for use with a double door installation, which includes an astragal strip secured along a vertical edge of an inactive door. A lock block is slidably disposed in at least one end of the astragal strip, and can be moved between an extended position, for securing the inactive door, and a retracted position for freeing the inactive door. The lock block has a projecting bolt receivable in a receptacle in a door frame, when the lock block is slid to its extended position. A gasket is secured to an end of the lock block, and the bolt passes through an opening in the gasket. The gasket engages and seals against the door frame, when the lock block is in its extended position. Gaskets are also provided on the sides of the lock block, for engaging and sealing against the doors of the double door installation. When the doors are closed and secured in place, the lock block and gasket assembly prevents drafts from flowing under the door installation beneath the astragal thereof.

Document AB (U.S. Patent No. 5,350,207 (Sanders)) and Document AC (U.S. Patent No. 5,328,217 (Sanders)) disclose locking astragals, for attaching to an inactive leaf of a double doorway, and in particular Document AB (U.S. Patent No. 5,350,207). Each of the locking astragals has an elongated astragal casing, which has a channel and bolt-slide assemblies mounted slidably within the channel. Each bolt-slide assembly includes a latching member and bolt. By

depressing the latching member, the latching member can slide through the channel, to extend and lock the bolts into indentations in upper and lower surfaces of a door frame. The bolts may also be retracted back into the astragal, to open the inactive leaf. Each of the latching members has an integral spring, which simplifies fabrication and assembly.

Document AD (U.S. Patent No. 6,491,326 (Massey, et al)) discloses a swing adaptable astragal with lockable unitary flush bolt assemblies, for double door entryways, which includes an extruded aluminum frame into which upper and lower flush bolt assemblies are slidably disposed. The flush bolt assemblies include a long metal bolt about which is injection overmolded a series of retainer guides, which ride in the frame. Locking mechanisms are also integrally overmolded onto the bolts. The frame and all components of the astragal assembly are symmetrical and reversible, so that the assembly is non-handed; that is, it can be adapted to both a right hand swing and a left-hand swing inactive door. A strike plate mounting system and bottom-sealing block are provided, and the upper end of the assembly includes means for sealing against a stop of a head jamb. Drafts at upper and lower inside corners of the doors of a double door entryway may be prevented.

Document AE (U.S. Patent No. 6,125,584 (Sanders)) discloses an automatic door bottom for a hinged door, which is pivotable to be positioned over a sill when closed, the door having a hinge side and a width, the door bottom having

an inverted channel having an open bottom, a length corresponding to the door width and a hinge end corresponding to the hinge side of the door; a sealing member having a length corresponding to the length of the channel, the sealing member being housed in the channel and being movable vertically downwardly into a sealing position, in which the sealing member contacts the sill when the door is closed; and a displacement mechanism installed in the channel and coupled to the sealing member, for moving the sealing member vertically into the sealing position in response to closing of the door, wherein the displacement mechanism is coupled to the sealing member at a plurality of points along the length of the sealing member, and is operative to move the end of the sealing member at the hinge side of the channel into the sealing position, prior to the remainder of the sealing member, during closing of the door.

Document AF (U.S. Patent No. 6,457,751 (Hartman)) discloses a locking assembly for an astragal, which can be attached to an inactive door of a double door unit of a residence or a building. The astragal is attached to an edge of the inactive door in space between the inactive door and active door. A separate locking assembly is attached adjacent a top end of the door and also adjacent a bottom end of the door. A plug having an elongated locking bolt extending therefrom is mounted in a front end of a carriage member. Additional structure is provided for reciprocal travel of the carriage member between a locked position and an unlocked position.

Document AF (U.S. Patent No. 5,335,450 (Procton)) discloses an astragal, which has an exterior aluminum extrusion and an interior wooden portion. The exterior extrusion includes a pair of rearwardly extending center walls, which form a channel for receiving the wooden interior portion. Attachments and door hardware can be installed in the wooden interior portion, while the extruded exterior acts as cladding.

Document AG (U.S. Patent No. 5,590,919 (Germano)) discloses a T-astragal and sleeve for door, for use with double swinging doors, such as for french doors. The T-astragal includes a cap portion perpendicular to a base portion, wherein both the cap and base can be formed from wood, such as plywood or plastic. The T-astragal is a molding that extends the full height of the swinging doors. One side of the base portion is fixably coupled to the free end of one of the swinging doors by nails or screws. The free end of the other swinging doors is able to swing up to and against a shoulder portion formed from the cap and base portions. A metal pipe shaped sleeve having an approximate length of one foot is partially positioned along the longitudinal axis of the T-astragal molding. A bolt slides within the sleeve from a rest position to an extended position, where the extended position locks the attached door to a matching slot in the door frame.

Document AH (U.S. Patent No. 4,429,493 (St. Aubin)) discloses an astragal housing seal and lock, for use in a double door assembly having an active door

and a relatively inactive door. The astragal has a vertically extending mullion housing, which is attached to a free edge of the relatively inactive door. A vertically extending slide section is mounted on the mullion housing on a sealing side of the free edge of the inactive door. The slide section extends from the free vertical edge of the inactive door, when the active door is in the closed position. The slide section is vertically movable from an unlocked position to a locked position, wherein the slide section is moved vertically downward, with respect to the mullion housing, to engage the sill/threshold of the door frame, thereby preventing movement of the inactive door.

Document AI (U.S. Patent No. 4,058,332 (DiFazio)) discloses an astragal and flush bolt assembly to be secured to a relatively stationary member such as a door jamb or to the edge of an inactive door of a pair of double doors or the like. The astragal assembly includes a flat metal body mounted on the edge of the stationary member and a metal stop member secured to the body along one edge thereof. The flat body includes first and second spaced apart legs extending outwardly from the stationary member, with the flat body and legs defining a channel to receive and retain a door latch bolt from the active door. The stop member prevents movement of the door in a first direction, and when the latch bolt is engaged in the channel, the channel and latch bolt prevent the door from moving in the opposite direction. A pair of flush bolts are slidably mounted in the channel, one adjacent each end thereof, so that when the astragal

assembly is utilized with double doors, the flush bolts are moved to engage the header and sill, respectively, to hold the inactive door stationary. The astragal body is secured to the stop member by a thermal barrier or thermal break structure, to provide thermal insulation between the inside and the outside of the doors. The stop member also includes a weather strip to form a seal against the active door, and when metal doors or metal covered doors are used, the weather strip may include a magnetic member to form a seal against the active door.

Document AJ (U.S. Patent No. 6,453,616 (Wright)) discloses an astragal for use with exterior double door installations, such as french doors. When attached to the edge of a generally inactive door, the astragal provides a door stop for an active door, a seal to prevent intrusion of water, and a lock for the inactive door. The invention particularly pertains to extruded metal astragals, capable of increasing the resistance of the double door system to high wind conditions. The astragal comprises a longitudinally extending base member that has at least one longitudinally extending channel and a pair of spaced apart outwardly extending legs. At least one bolt is slidably inserted in the channel adjacent to one of the first and second ends of the channel. The astragal is attached to the door, by at least one cleat whose spaced apart arms engage the legs of the base member, providing resistance to the astragal rocking in relation to the door edge, when the doors are subject to wind forces.

Document AK (U.S. Patent No. D293,719 (Stepanian)) discloses a combined astragal extrusion and seal.

Respectfully submitted,

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